

Florida Organics Recycling Center for Excellence – FORCE

Year Three Operating Plan

The Florida Organics Recycling Center for Excellence (FORCE) represents a cooperative effort involving the Florida Department of Environmental Protection (FDEP), Sumter County, and the University of Florida's Institute of Food and Agricultural Sciences (UF/IFAS). Organics represents a highly recyclable portion of the state's waste stream. The need for environmentally sound, economically feasible methods, and practical and applicable solutions for recycling and utilizing organics, and agricultural wastes throughout Florida will be addressed through this project. FORCE will execute numerous organics research projects, and the partnership with UF/IFAS and TAG industry representatives, as well as other appropriate organic industries and organizations, will offer an ideal combination of practical experience, research capability, and public education resources.

Year One and Two presented challenges for the County especially concerning its subcontractor UF/IFAS. The UF/IFAS management and administration team did not meet the expectations of the County. Therefore, the original sub-contract with UF/IFAS was terminated. Although the existing contract was terminated, the County believes a new relationship with a new research structure and new UF/IFAS leadership will place this public-institutional partnership back on track for Year Three. The time anticipated by the county to bring closure to outstanding invoice and reporting items has taken longer than expected and been costly to the County.

In addition, although the County obtained a *construction permit* and completed the construction of the FORCE in-vessel digester in Year One, the *operating permit* is currently outstanding with expectations for delivery in early Year Three. The county's slow pace has been to modify the existing permit in order to provide sufficient data to the DEP in order to obtain a two-day digester retention time. The County continued to offer and make available the existing digester to UF/IFAS staff for feedstock and technology testing in Year One and Two, with appropriate notification and planning with Sumter County staff. To date no request for utilization has been made by UF/IFAS staff. The continued use of the existing digester technology will be made available in Year Three to researchers until the new digester is in operation.

The following outline represents the PROPOSED tasks for Year Three and the contributions by the program partners listed in the attached project budget.

1. Design

- 1.1. Engineering, planning, construction and inspection for in-vessel digester
 - 1.1.1. Finalize outstanding site construction issues
 - 1.1.2. Finalize in-vessel operation and equipment testing with vendor
- 1.2. Plan certification and permitting for in-vessel digester
 - 1.2.1. Meet or correspond with the DEP regarding any modifications
 - 1.2.2. Finalize any necessary DEP operating permit documents
 - 1.2.3. Obtain operating permit from the DEP to utilize in-vessel digester for research projects and feedstock testing.

2. Construction

2.1. Office space/laboratory

- 2.1.1. Prepare lab space for transition from previous UF/IFAS to a shared research laboratory, office, and training/education center as appropriate
- 2.1.2. Purchase any necessary office furniture or supplies as appropriate
- 2.1.3. Occupy and utilize trailer as appropriate

2.2. Demonstration farm site preparation

- 2.2.1. Assess farm site preparation performed by Year 1 UF/IFAS staff
- 2.2.2. Assess status of existing farm plots initiated by Year 1 UF/IFAS
- 2.2.3. Confirm or cancel existing farm plot research projects
- 2.2.4. Receive and review research reports from Year 1 & 2 UF/IFAS staffing:
 - 2.2.4.1. Sumter County Bioassay
 - 2.2.4.2. Forestry Project
 - 2.2.4.3. Effect of Compost on Pasture Establishment & Growth
 - 2.2.4.4. Demonstration of Residential Compost Use for Homebuilders (Around Modular Office)
- 2.2.5. Revise (as appropriate) initial draft farm site layout for potential future research and demonstration plots; include plots for research for any of the following potential agricultural demonstrations:
 - 2.2.5.1.1. Citrus
 - 2.2.5.1.2. Forestry
 - 2.2.5.1.3. Horticulture
 - 2.2.5.1.4. Sod
 - 2.2.5.1.5. Soil/Media Blend
 - 2.2.5.1.6. Row crops
 - 2.2.5.1.7. Organic farming
 - 2.2.5.1.8. Golf turf & fairways
- 2.2.6. Complete existing and expand farm plot area as necessary based on research and demonstration projects to be funded

2.3. Installation of digester

- 2.3.1. Operate digester upon receipt of operating permit from DEP
- 2.3.2. Utilize various Florida feedstocks for research and demonstration, including, but not limited to the following agricultural, municipal, and construction feedstock:
 - 2.3.2.1.1. Animal Manure
 - 2.3.2.1.2. Dead Animal Remains
 - 2.3.2.1.3. Biosolids
 - 2.3.2.1.4. Retail & Restaurant Food Waste
 - 2.3.2.1.5. Municipal Solid Waste
 - 2.3.2.1.6. Scallop Viscera/Seafood Waste
 - 2.3.2.1.7. Wood Waste
 - 2.3.2.1.8. Yard Waste
- 2.3.3. Monitor digester during usage for FORCE projects
- 2.3.4. Maintain digester for proper operation for FORCE projects

2.4. Laboratory

- 2.4.1. Inventory with UF staffing laboratory equipment purchased by UF/IFAS staff with FORCE funding; UF/IFAS to document laboratory equipment and office purchases for Y2 annual report to DEP
- 2.4.2. Complete furnishing laboratory as necessary for various research projects
- 2.4.3. Utilize laboratory for research analysis

2.5. Irrigation system

- 2.5.1. Inventory existing irrigation system installations by UF/IFAS in Year 1 and Year 2; UF/IFAS to document irrigation equipment purchases for Y2 annual report to DEP;
- 2.5.2. Continue ongoing review of irrigation system needs
- 2.5.3. Provide necessary expansion for 40 acre demonstration farm as needed
- 2.5.4. Maintain irrigation system for proper operation

3. Operation

3.1. Process technology procurement and testing

- 3.1.1. Evaluate personnel needs
- 3.1.2. Review vendor information and technology data gathered in Year One and Two
- 3.1.3. Perform follow-up with interested vendors responding to request for technology information in Year Two
- 3.1.4. Update Technology Database Information as Necessary
- 3.1.5. Post Technology Vendor Contact Information on Website
- 3.1.6. Revise Technology Evaluation Criteria Form as necessary and perform follow-up calls on technology for placement at FORCE and use in future research projects
- 3.1.7. Purchase equipment for technology testing and identify public or private principal investigators to test equipment through RFP process, for example:
 - 3.1.7.1.1. Smaller in-vessel systems (earth tub)
 - 3.1.7.1.2. Windrow ancillary equipment & technology
 - 3.1.7.1.3. Ancillary equipment such as screens and grinders
- 3.1.8. Identify in-kind equipment and transfer to FORCE site, including, but not limited to the following potential equipment:
 - 3.1.8.1.1. Eglin Air Force Base Ag Bag
 - 3.1.8.1.2. Alachua County Wright Environmental System
- 3.1.9. Test technology and provide results for publication, presentation, training, and FORCE website posting

3.2. Feedstock procurement and processing

- 3.2.1. Assess feedstock identified by UF/IFAS staff in Year 1 and 2
- 3.2.2. Identify available feedstock from TAG industry representatives and other public/private sector sources, including, but not limited to: animal manure, poultry and other dead animal remains, biosolids, MSW, wood waste and land clearing debris, commercial and institutional waste, yard waste, etc.

- 3.2.3. Prepare and release research RFP to include requested and advised projects recommended by TAG, including but not limited to the use of feedstock sources such as: dead chicken remains, biosolids, yard waste, etc.
- 3.2.4. Convene RFP selection committee to review proposals
- 3.2.5. Identify and select Year 3 research and demonstration projects
- 3.2.6. Award Year 3 projects
- 3.2.7. Continue to identify feedstock sources and transportation sources
- 3.2.8. Identify and determine processing requirements for projects
- 3.2.9. Initiate acquisition as appropriate for both in-kind and purchased feedstock

3.3. Administrative costs, supplies, and travel

- 3.3.1. Travel to and from conferences, workshops, training, and meetings
 - 3.3.1.1. Recycle Florida Today Organics Committee Conferences & Meetings
 - 3.3.1.2. United States Composting Council Conferences & Meetings
 - 3.3.1.3. Other appropriate organics training workshops and conferences as appropriate
- 3.3.2. Purchase appropriate administrative supplies
- 3.3.3. Attend industry conferences as appropriate

4. Market Development, Education, and Training

4.1. Educational analysis, outreach and website

- 4.1.1. Assess educational target audiences and education plan prepared by UF/IFAS, review and revise as necessary
- 4.1.2. Continue to identify and document composting education sources and outlets in the state and nationally
- 4.1.3. Identify types of education material necessary for industry usage and integration
- 4.1.4. Review and approve appropriate TAG education materials to assist end-user marketing promotion and increase usage of organic products R
 - 4.1.4.1.1. Revise and reprint erosion and sediment control guide to expand FL DOT marketing efforts
 - 4.1.4.1.2. Develop Organics BMP manual(s) for appropriate agricultural industries
- 4.1.5. Identify distribution channels in Florida for disseminating educational material to appropriate target audiences (e.g. TAG industry represented markets such as the Florida Nurserymen and Growers Association & the Florida Poultry Federation)
- 4.1.6. Ongoing development and marketing of education material
- 4.1.7. Provide bibliography for and continue maintenance of FORCE Website and update appropriately
- 4.1.8. Organize and conduct appropriate field days, workshops, or training programs as educational channels are developed for respective industry sectors
- 4.1.9. Maintain partnerships to leverage education, marketing and training events with industry organizations such as:
 - 4.1.9.1.1. RecycleFlorida Today Organics Committee (RFT)
 - 4.1.9.1.2. United States Composting Council (USCC)
 - 4.1.9.1.3. Solid Waste Association of North America (SWANA)

4.2. Technical Advisory Group (TAG)

- 4.2.1. Conduct TAG meeting(s)
- 4.2.2. Evaluate TAG participation and TAG categories
- 4.2.3. Notify TAG of FORCE activities as appropriate
- 4.2.4. Request and receive recommendations from TAG members on appropriate project activities, industry marketing efforts and education needs, in their field of expertise:
 - 4.2.4.1.1. Agriculture
 - 4.2.4.1.2. Citrus
 - 4.2.4.1.3. Construction
 - 4.2.4.1.4. Food Service
 - 4.2.4.1.5. Golf
 - 4.2.4.1.6. Horticultural
 - 4.2.4.1.7. Institutional
 - 4.2.4.1.8. Landscape
 - 4.2.4.1.9. Municipal
 - 4.2.4.1.10. Transportation
- 4.2.5. Distribute appropriate project documents to TAG members

4.3. Market Development

- 4.3.1. Identify and document market opportunities with TAG Industry Representatives
- 4.3.2. Target and document specific industry composting opportunities to expand Florida's organic markets
- 4.3.3. Partner with industry organizations and other appropriate entities (RFT, USCC, SWANA) to develop markets

4.4. Conferences and meetings

- 4.4.1. Present the FORCE project at conference(s) such as RFT, USCC, SWANA, Biocycle, & NRC
- 4.4.2. Participate in organizational association meetings to promote FORCE
- 4.4.3. Identify appropriate organizations to target and prepare a marketing plan for a FORCE presence at these industry events, including but not limited to, the citrus, golf, nurseryman, foliage, farmers, and poultry industries.

4.5. Demonstration farm operations

- 4.5.1. Assess and review results from UF/IFAS Year 1 and Year 2 staffing activities
- 4.5.2. Identify appropriate demonstrations for 40 acre demonstration site
- 4.5.3. Prepare and release research RFP to include requested and advised projects recommended by TAG, including but not limited to: sod and peat R& D projects
- 4.5.4. Prepare Phase-in plan for demonstration site
- 4.5.5. Engage industry partners to provide in-kind donation of farm plot materials, seeds, plantings, and equipment
- 4.5.6. Assess staffing needs
- 4.5.7. Install and monitor demonstrations as appropriate

5. Evaluation, Monitoring and Testing

- 5.1. SAC protocol development
 - 5.1.1. Review UF/IFAS SAC Deliverables (SAC protocol) for Year and Year 2
 - 5.1.2. Revise SAC protocol as appropriate
 - 5.1.3. Convene SAC meeting (s) with committee members:
 - 5.1.3.1.1. Lewis Carr, Ph.D., University of Maryland
 - 5.1.3.1.2. Rufus Cheney, Ph.D., USDA, Maryland
 - 5.1.3.1.3. George Frey, Ph.D., Independent Consultant, Maryland
- 5.2. Feedstock and products testing
 - 5.2.1. Review bioassay procedure (test procedure) and sampling protocol for products requiring further analysis prepared by UF/IFAS in Year 1 and 2
 - 5.2.2. Implement research protocol
- 5.3. Environmental monitoring
 - 5.3.1. Review monitoring protocol developed by UF/IFAS and prescribed by SAC for researchers
 - 5.3.2. Implement monitoring protocol

6. Project Management

- 6.1. Personnel
 - 6.1.1. Evaluate FORCE staffing changes in Year 3
 - 6.1.1.1. Assess FORCE Superintendent position
 - 6.1.1.1.1. Prepare position description
 - 6.1.1.1.2. Receive approval from Sumter County Board of Commissioners for a new position and a new County Department called FORCE in the Public Works Department called FORCE
 - 6.1.1.1.3. Promote and interview for position
 - 6.1.1.1.4. Hire FORCE Superintendent
 - 6.1.1.2. Assess FORCE farm and demonstration specialist
 - 6.1.1.2.1. Prepare position description, if appropriate
 - 6.1.1.2.2. Promote and interview for specialist position, if appropriate
 - 6.1.1.2.3. Hire specialist, if appropriate
 - 6.1.2. New FORCE staff will report to FORCE Director, Garry Breeden or his designee, and be housed at the FORCE mobile office and laboratory
- 6.2. Administration Fees
 - 6.2.1. Indirect Costs, as billed
- 6.3. Annual work plans and budgets
 - 6.3.1. Prepare quarterly reports, appropriate forms, and reimbursement requests
 - 6.3.2. Develop annual workplans and budgets

- 6.3.3. Prepare all necessary annual reports and appropriate deliverable attachments for previous year
- 6.4. Project Coordination and Contract Administration by County Consultant
 - 6.4.1. County Consultant perform project management duties until FORCE Superintendent is hired
 - 6.4.2. Act as Contract Administrator and Project Coordinator for FORCE Director and Grantee, Sumter County
 - 6.4.3. Perform contract administration and project coordination functions in conjunction with the FORCE Director and Sumter County staff
 - 6.4.4. Assist FORCE Director with management of FORCE staff, research and demonstration projects, technology evaluation, marketing, education, and operations, etc.
 - 6.4.5. Coordinate and manage project meetings, deliverables and project tasks
 - 6.4.6. Facilitate project communication with TAG, SAC, private and public sector, industry organizations as requested by FORCE Director
 - 6.4.7. Prepare and distribute all necessary project reporting and invoicing documents
 - 6.4.8. Any additional project assistance as requested by FORCE Director